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ABSTRACT

This paper theorizes on the pattern in which investment in human capital affects the well-being of the rural community and is affected by public policy on education finding. Outmigration from rural regions is more likely for individuals with the highest educational achievement. Therefore, remote school districts tend to underinvest in education. In the case that all taxable property and therefore the tax burden is concentrated in the hands of a relatively few of the households, the actual level of investment in human capital would depend upon political institutions. Given the above factors, the only way out of chronic poverty for a remote rural district appears to be through intergovernmental transfers. There are three philosophical bases for programs of intergovernmental transfers to support public education: (1) minimum provision; (2) equal access; or (3) equal total provision. Examination of South Carolina's "minimum foundation" education shows that urban and rural differences in educational resources are narrowed, but differences in per-pupil expenditures on a district by district basis remain wide. Use of human capital formation as a strategy for rural development is feasible if: (1) there is an effective program for transferring resources for education from the affluent to the poor parts of the state; and (2) there is local leadership that is informed regarding the benefits of investments in education. This document contains a table comparing per pupil expenditures by urban and rural districts in South Carolina. (KS)

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J.C. Hite, J.B. Khatri-Chhetri, and D.T. Williams*

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A draft of paper prepared for presentation at the 29th annual meeting of the Southern Regional Science Association, Washington, D.C., March 22-24, 1990.

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HUMAN CAPITAL FORMATION AS A STRATEGY FOR RURAL DEVELOPMENT: WHO BENEFITS AND WHO PAYS?

I. Introduction

We begin this paper with the assumption that human capital is a significant factor in creating material wealth, that there is a high probability that certain specific types of investment in public education will expand the stock of human capital, and that types of investment can be affected by public policy decisions. The substantive matters of these assumptions are the subjects of the other two papers in this session, and even if the evidence cited in these earlier papers calls some of these assumptions into question, it is still analytically useful to consider distributional aspects of investments in public education.

This paper does not present new empirical research of note. While not disdaining empirical research, we wish to argue that the most significant policy questions regarding rural development do not require empirical research to arrive at answers. Moreover, by our lights, the appropriate conceptual foundations for empirical research are not yet well laid, particularly with regard to the fundamental distinguishing characteristic of rural areas --- i.e., that they are relatively remote components of a spatial economy. Hence, in this paper, we offer the results of "armchair" reasoning, seasoning only lightly with empirical data drawn from South Carolina. Our primary goal is to arrive at a reasonable judgement regarding the feasibility of a human capital strategy for rural development policy. In achieving that goal, our objective is to determine the essential elements of a rational rural development policy that adopts the human capital strategy.

II. Rural Communities in a Spatial Economy

Externalities in Rural Space

To begin the analysis, it is useful to start with a simple case, even if that involves making some very restrictive assumptions: Let us assume that:

1. We are living in a remote district, in a Thunen world, on a homogeneous plain whereon sits a distant isolated city that is the sole market for the products of our locality.

2. That the locality (or rural district) wherein we live exhibits the relatively high birth rates traditionally observed in rural areas.

3. That there is zero population mobility across the homogeneous plain --- i.e., people live out their lives close to the place where they were born.

4. And finally, that there are zero intergovernmental transfers of revenue across the plain and the only tax instrument locally available is the property tax.

While such assumptions oversimplify the situation existing in almost any real-world rural school district, they establish a beginning point in seeing a stereotypical rural school district.

In such a district, population will grow over time at a faster rate than in districts near the urban center. Since the birth rates (per 1000 population) are assumed to be higher in our district, the percentage of school age children will grow exponentially. But because the district is remote, site-value rents will be relatively low. The property tax base is some index of the capitalized value of those rents, and, hence the tax base for supporting schools will be relatively low. So our district will be in the unenviable position of having a relatively large number of children to educate and relatively few resources to support that education.

Over time, the differences in human capital stocks prevailing across the Thunen plain will make it impossible to claim that the plain is any longer homogeneous in any real economic sense. At the cost of falling real wages, our remote and relatively disadvantaged district can try to exploit a range of the technical possibilities for substituting labor for capital in an attempt to remain competitive in the products it offers in the isolated urban market. Yet while such substitution is going on, our district sinks progressively into greater and greater poverty. As time elapses and this poverty becomes more intense, the imbalance between the tax base to support education and the number of children to be educated will become an ever increasing weight dragging our district deeper into chronic poverty.

This gloomy outcome can be avoided if we relax the assumption of zero population mobility. Without assuming perfect mobility over space, let us assume that migration between points on the plain is some direct function of the relative difference between wages rates prevailing at those points, and some inverse function of the distance between those points. In short, that migration between points on the plain can be modeled with the familiar gravity formulation.

This new assumption means that the population pressure in our remote district is relieved, somewhat. Consequently, the number of children that must be educated from our tax base will be reduced. If there is any correlation between per-pupil expenditures and educational attainment (as McNamara and Deaton have been able to show in Virginia --- see also Akin and Garfinkel; Fuller, Gorman and Edwards; Hanushek), each graduate of our schools should embody more human capital than would have been the case if no migration occurred. With a smaller pool of workers and the workers in that pool better educated --- and hence, presumably, more productive --- the marginal return to labor should be

higher. That would suggest higher wage rates and higher per-capita income than in the extreme case of no migration.

But we still live in a remote district operating under the economic handicap of distance from our sole market. Net product prices, F.O.B. our location, will be relatively low. That means that total output will be relatively low, and if the migration rate is less than what is required to maintain a stable population, output per capita will be falling. Because we are remote, we must either reduce our birth rate or export a relatively large percentage of our youth if we are to achieve any rough parity of per-capita incomes with more favorably situated districts. Indeed, we must do one or both if we are to just hold our own when our per-capita incomes are compared to those in other places on the plain.

Let us set the option of reducing birth rates aside since it is not central to our concerns here. Our district must educate students to leave and take jobs elsewhere. We have to have net out-migration to thin out our population. Even if we assume that those who migrate are a random cross-section of the annual crop of public school graduates, we will be drawing upon our comparatively thin property tax base to invest in human capital that will increase the output of other districts and provide economic benefits in those other locations. If, as is more likely the case, those who out-migrate contain a disproportionate number of those from the top end of that crop of graduates, we will be subsidizing human capital formation for other districts in a way that gives those more favorably situated districts even greater economic advantage relative to us.

Why might it be the case that those who out-migrate are the cream of the crop? The cream of the crop from our underfunded schools may possess no more human capital than the lower end of the crop in districts with stronger tax bases and greater tax capacity per pupil. Yet the upper end of our crop will be better able to compete in the urban job markets than our average, or below-average, graduate. So it is not surprising that the empirical evidence shows that out-migration from rural regions is more likely for those with the highest educational achievement. They are the ones for whom the mean expected benefit from migration is greatest. Consequently, the human capital subsidy from the rural district is greater than the sum of the cumulative mean per-pupil expenditures of the district during the out-migrants' school years.

That is not to say that expenditures on education does not produce benefits for our remote, rural district. To the extent that the human capital embodied in the residual population is increased, the resident workforce is more productive and per-capita incomes are increased. But since some of the benefits of these expenditures accrue to other regions, there is a site-specific externality. All of the costs of providing the benefits must be borne by resources that happen to exist in our remote, rural, relatively impoverished district, but some fraction of the benefits will flow to our competitors in the central market. The existence of this externality will cause a rural district like ours to make sub-optimal investments in education from the perspective of the entire economy of the plain.

Not only will our remote, rural school district have incentives to make sub-optimal investments generally, there are incentives to spend tax dollars on education in ways that minimize the subsidies going to other localities. That sort of education that is geared toward those with special intellectual gifts will be slighted because those with the special gifts are the most likely candidates to carry the human capital subsidy out of the district through migration. Vocational education is likely to be focused narrowly upon those skills used locally rather than those in demand in the economy of the entire plain. Education in subjects like foreign languages that exposes students to other cultures and increases the ability of human beings to adjust to a non-familiar environment will not likely have much appeal. In short, not only will the remote district underinvest in education generally, it will have incentives to provide only narrow educational opportunities.

Externalities Within Rural Society

Remote, rural districts may be viewed as places near to the extensive margin in a Thunen spatial system, and hence, on some type of economic frontier. All remote localities such as ours are either part of, or the residuals from, some frontier in space. Because frontiers also exist at particular periods in time, the frontier has been a central theme in American historiography since the time of Frederick Jackson Turner. In a remarkable series of lectures, Professor William H. McNeill has expanded upon the frontier thesis to suggest a general framework for examining the dynamics of all of civilized history and developed hypotheses regarding the social structure within frontier regions under different sets of historical conditions.

The McNeill analysis is relevant to the concerns of this paper because it sheds light on the distribution of benefits and costs to investments in education within a remote rural district such as ours. Hence, we will borrow from McNeill, superimposing the McNeill framework upon the Thunen spatial system. We retain the basic assumptions that our district is remote and that the property tax is the sole source of revenue to finance schools.

Let us consider two alternative cases regarding the social structure of the district: (1) a situation in which all households within the district possess an equal share of the taxable property, and (2) a situation in which all taxable property is concentrated in the hands of relatively few of the households. The former situation would approximate that prevailing in rural school districts in the upper Middle West of the United States; the latter, the situation growing out of the history of the plantation agriculture of the Deep South of the U.S.

In the first situation, the distribution of benefits and costs is such that those who bear the costs of public education share the benefits in rough (although not exact) proportion to the benefits received. While large households with many children to educate may receive greater benefits than households with no children to educate, and while households with children who are above average in their receptivity to education presumably reap benefits greater than those with children who do not response as well to the educational process, the situation gives

rise to only small reallocations of wealth that would lead to internal externalities --- i.e., externalities arising because of the existence of distinct taxpaying and tax consuming classes within the district.

Now, let us examine the other posited situation, i.e., that where the holding of taxable property is quite concentrated. In such a case, the benefits of investments in education are likely to be widely dispersed throughout the population, but the costs likely to fall on only a few. While there is argument among economists over whether the property tax is shifted, and if so, by how much, there is little argument that increases in the property tax will, other things constant, drive down the market value of property. Hence, those who hold property at any given time bear, in perpetuity, some fraction of a tax increase occurring at that time. Even if the class of property owners and the class without taxable property both hold identical sets of utility functions, and all households in the district perceive exactly the same marginal benefits regarding investment in education, the fact that the property owners have a larger marginal cost will cause the holders of taxable property to disagree with their fellow citizens regarding the optimal investment in education.

When such disagreements exist, the actual level of investment in human capital depends upon political institutions. Assuming one-man, one-vote, there is the possibility that the more numerous non-tax paying citizens could compel taxable property holders to make greater investments than would be optimal from the rational perspective of those property holders. Hence, in cases of very extreme concentration of taxable property holding, the outcome in the form of human capital investment may not be greatly different from that which can be observed in districts where there is an almost equal distribution of taxable property.

Yet if we assume that the population is equally split between holders of taxable property and those with none, or even if the balance is only approximate, the political outcome of this disagreement will depend upon political skills and other factors that, over time and space, can be expected to be randomly distributed between those who favor more and those who favor less expenditure on public education.

There is at least one factor affecting that outcome, however, which is not likely to be randomly distributed --- political energy. If property owners consider that the difference is relatively large between their private marginal benefits and costs from additional expenditures on education, they will have strong incentives to become politically active. At stake in the political arena are the place-specific real estate assets of the property owners and the economic opportunities for wages and salaries open to spatially-mobile human capital. Because the stakeholders of the non-property owning class are numerous, the value of the stake to any one is apt to be small --- perhaps so small as to seem trivial, perhaps highly discounted. So the holders of the larger stakes ---i.e., the holders of taxable property --- though fewer in number, will have more incentive to be energized to influence outlays in education and may dictate the actual level of human capital investment in our district. In that case, there will not only be an under-

investment due to the externality in rural space, but also because of the internal externalities within rural society.

Intergovernmental Transfers

Such an end can be avoided by relaxing our initial assumption of a relatively high birthrate in our rural district. But, again, the birth control option, while worthy of academic consideration, is not of much concern here in a discussion of rural development strategy because it is probably not politically feasible in the present social climate.

If we relax the assumption that the property tax is the sole source of revenue for local schools, the incentive for holders of taxable property, although a minority, to act upon their perceived externality will be diminished. Hence, a diverse set of sources for revenue to fund public education makes for more than two simple classes of local residents. As the complexity of the class structure increases, the possibilities increase for those committed to greater funding for education to form coalitions and achieve political majorities. Addition of a local-option sales tax to the set of local tax instruments, for instance, will do nothing to overcome the problems associated with externalities in space, but if it lightens the tax load on property, it will weaken resistance from property owners to increased tax expenditures on education.

Yet such analysis begs the question whether we can expect that there will be any local residents sufficiently committed to improved education to bear the often high transactions costs in forming coalitions in support of public education. Smith suggests that such leadership is related to existence of local job opportunities accessible only by educational attainments. McNeill suggests that there may be inherent aspects of rural regions that will cause power to be concentrated in relatively few hands. It would be easy here to digress into discussion of the role of leadership development as part of any strategy for rural development, and we will return briefly to the subject in closing. But such a digression must be avoided. It seems reasonable to assume that in some, if not many, rural districts like ours these high transactions costs will discourage building of the necessary local coalitions. So, even if there are local tax and revenue resources other property, it follows that local political calculations generally will favor underinvestment in human capital in rural districts.

Given the externalities in space and the internal class externalities within rural society, the only way out of chronic poverty for a remote rural district appears to require relaxing our assumption of zero intergovernmental transfers. The underinvestment in human capital in rural districts like ours causes aggregate production across the entire plain to be less than its potential. By returning, in the form of intergovernmental transfers, the human capital subsidy that in-migrants from rural districts bring to them, more-favorably-situated districts could achieve net gains in welfare in a dynamic system. Hence, some comprehensive system of intergovernmental transfers from more affluent places on the plane to the more remote rural places would seem to offer

opportunities for increases in welfare on the part of both the urban and rural districts.

III. School Finance Equalization

Competing Philosophies

For whatever reasons, 25 states have adopted some form of such intergovernmental transfers for purposes of supporting public education [Cibulka, p. 331]. In general, the political arguments used to win statutory enaction of programs providing such transfers centered on improvements in equity, not efficiency. But, as the foregoing analysis is meant to show, it is possible to advance an argument for such programs of intergovernmental transfer on efficiency grounds, without any reference to equity.

According to a widely-used textbook for graduate courses for training school administrators [Guthrie, et al., p. 144], there are three philosophical bases for programs of intergovernmental transfers to support public education:

1. Minimum Provision: The larger society (i.e., the state in an American context) should guarantee that everyone has opportunity for a "minimum" education.

2. Equal Access: All the people of the larger society deserve equal access to the resources set aside for education by the larger society.

3. Equal Total Provision: The larger society should guarantee that all people have equal educational opportunities.

While these three propositions share many similarities, there are subtle differences. The first two propositions allow for basic budgetary decisions affecting educational content to be made at decentralized levels. But the "minimum provision" argument allows for acceptance of fairly wide urban-rural differences in per-pupil expenditures so long as the disadvantaged rural communities have sufficient resources to offer what is often called a "minimum foundation education." The "equal access" argument tolerates no such urban-rural differences. The last two propositions have in common a commitment to equality across school districts, but the "equal total provision" argument does not preclude centralized decision making in education.

These differences allow the specific formula constructed to redistribute educational resources to take many forms. If the "minimum provision argument" is dominant in shaping the formula, the correction of externalities in educational expenditures in the disadvantaged rural districts will depend upon how the "minimum foundation" is conceived and who does the conceiving. The "minimum provision" formula is likely to increase social utility, but unless the nature and size of the externalities in space and in rural society are understood when the "minimum foundations" is defined, there is no reason, other than happenstance, why the externalities should be corrected. Consequently, the latter two

arguments are to be preferred in that by demanding equal per-pupil allocations, they do not tolerate continuance of the externalities in space. In the cases of the "equal total provision argument," there is no toleration either of externalities in rural society. Whatever class-interest biases exist in "equal total provision" programs are those on the elites in the larger society.

Yet, there is no a priori basis for a choice on efficiency grounds between the two arguments emphasizing equality. The primary difference between the two is that the "equal access" argument allows for the class-interest biases of the ruling rural elites to influence allocations within the education budget, and the "equal total provision" argument concedes such influence to the more cosmopolitan elites of the larger society. So long as its is assumed that population/labor is not perfectly mobile across space, a case can be made that efficiency is best served by decentralized decision-making that accounts for local peculiarities.

In fact, most of the existing state programs of intergovernmental transfers for support of public education appear to be premised principally upon the "minimum provision" argument. Cibulka reports that in 1983-84, twenty-five of the states with intergovernmental transfer programs used "some measure of pupil poverty" as the operative argument in their formulas [p. 331]. Nationally, states contribute just under half of the costs of public education from the central treasury. Of the 23 states contributing more than the national average, only four --- Hawaii, New Mexico, Washington, and California -- contribute as much as seventy percent [See Table 138, NCES, p. 149]. Hence, on empirical/operational criteria, it appears that these four states are the only one where the "equal access" argument has been influential. Hawaii is the only state where the educational system is structured in conformity with the "equal total provision" argument.

Minimum Foundation Formulas

Some indication can be obtained of the degree of inequality in per-pupil expenditures that can exist with minimum foundation programs by examination of the situation in South Carolina. The South Carolina program of intergovernmental transfers for public education was established in the Education Finance Act of 1977. Under terms of that act, the state assumed responsibility for providing (up to) seventy percent of the funds needed to support a minimum foundation educational opportunity for all students across the state. A complicated formula was specified that: (a) establishes cost-weightings for pupils by grade level and for different levels and types of handicaps, (b) establishes annually the minimum foundation outlay requirements for each district, and (c) requires districts with greater than the statewide average per-pupil tax base to contribute proportionally more, and those with less than the statewide average per-pupil tax base to contribute proportionally less, than thirty percent of the outlay requirements [See Chap. 20, S.C. Code].

The latest year for which South Carolina data are available is 1987-1988. Hence, using these data, it is possible to observe inter-

district differences in school finance during a period when it seems reasonable to assume that any shocks caused by introduction of the new financing scheme have played out and the system is in a state of near equilibrium as defined by public choice models.

The extent of the urban-rural difference in local educational resources in South Carolina can be quickly demonstrated. The only local source of revenue available to South Carolina school districts is the property tax. In 1987-1988, the assessed valuation per pupil in the most affluent (and suburban) school district was almost three times that of the poorest (and rural) district. The mean assessed valuation per pupil in the non MSA counties was only 67 percent of the state mean. School districts in the non MSA counties accounted for 57 percent of all students in South Carolina public schools, but only 38 percent of the assessed valuation of taxable property [S.C. Dept of Ed.].

Table 1 provides an indication of the effect of the South Carolina scheme in eliminating interdistrict differences in per-pupil expenditures. With redistribution of revenue, South Carolina has almost eliminated the differences in per-pupil expenditures between districts in MSA and rural counties. In 1987-88, per-pupil expenditures in the MSA averaged $3,412. The per-pupil expenditure in rural districts averaged $3,126, or almost 92 percent of that in the MSA districts.

While the South Carolina school district with the greatest taxable wealth per pupil (York #2) is in the Charlotte suburbs, and the poorest (Marion #4) is in rural Pee Dee west of Myrtle Beach, some rural districts have more taxable property per pupil that some districts in MSA counties. Hence, comparisons of urban-rural means tend to mask some of the most important distributional aspects of the South Carolina Education Act of 1977. In the 1987-88 school year, York #2, the wealthiest district in the state, received no net revenue from the state in laying out $4,079 per pupil, but Marion #4 received about 85 percent of its expenditures which amounted to $3,095 per pupil. The district expending the greatest amount per pupil expenditures were $$4,344 in Spartanburg #7, with the state contributing about 60 percent of the needed revenues. The district with the lowest per-pupil expenditure, Clarendon #2, received 77 percent of its revenues from the state treasury, but expended only $2,772 per pupil.

If the goal is assuring resources for a "minimum foundation education, the South Carolina scheme can be called a qualified success. The district with the lowest per-pupil expenditure is spending 87 percent of the average statewide per-pupil expenditure. The statewide average may be too low to provide what some would call a "minimum foundation," but the students in the schools in the most tightfisted (but not the poorest) district are benefiting from a level of expenditures per pupil that is not far removed from the state average. Moreover, the students in the poorest district, where taxpayers are making substantial local effort, are enabled to benefit from per-pupil expenditures that are, in fact, 118 percent of the statewide average.

Moreover, as indicated in Table 1, the South Carolina scheme for fostering a "minimum foundation" education is successful in terms of general tendencies. Urban and rural differences in educational resources are substantially narrowed. But examination of per-pupil expenditures on a district by district basis reveals that wide inter-district differences remain. Per-pupil expenditures in the lowest spending district are only 64 percent of those in the highest spending (but not the wealthiest) district. Some poor rural districts (such as Marion #4) have opted to levy higher tax rates in order to supplement state revenues and exceed the statewide average per-pupil outlay. Some poor rural districts (such as Clarendon #2) have opted to make only the minimum local effort required by state law, and, even with substantial contributions from the state treasury, expend less per-pupil than the statewide average. The very high proportion of Afro-American students and the concentration of property holding in the hands of whites in Clarendon #2 suggests the effect of the externalities within rural society on local educational expenditure decisions.

IV. Implications for Rural Development

What are the implications of the foregoing analysis for public policy to foster rural development? We believe there are three significant points:

1. Externalities in space will generally cause remote, rural regions to underinvest in public education if all such investment must be made from local resources.

2. Consequently, there are efficiency, as well as equity, arguments for intergovernmental transfers to support public education.

3. Although about half the states have some scheme of intergovernmental transfers earmarked for public education, most are premised upon assuring resources for some "minimum foundation" education, these programs are not specifically aimed at improvements in efficient and leave considerable discretion to local political institutions.

Hence, it seems reasonable to conclude that use of human capital formation as a strategy for rural development is feasible only if two conditions are met: 1) there is an effective program for transferring resources for education from the more affluent to the poorer parts of the state and nation, and 2) there is local leadership that is informed regarding the benefits of investments in education and capable of forming the necessary coalitions to support near-optimal levels of local tax effort.

Table 1. Comparison of Per-Pupil Expenditures, Primary and Secondary Schools, by MSA and Rural Districts, South Carolina, 1987-88.

Item	MSA Districts	Rural Districts
Total Expenditures	$863,542,509	$1,057,691,681
Pupils	253,065	338,395
Percent of Total Statewide Expenditures	44.9%	55.1%
Percent of Students	43.0%	57.0%
Per-Pupil Expenditures	$3,412	$3,126

SOURCE: Calculated from data supplied by the S.C. Dept. of Education.

All this still begs the question whether increased per-pupil expenditures on public education produce economic benefits. If it is established that such expenditures do indeed produce the desired payoffs, then it appears that state, and perhaps federal, aid for rural schools is an essential part of any rational rural development policy. Yet, unless that aid includes such strings as to usurp local school control, state and federal aid for rural schools are not sufficient conditions for rational policy. The policy formulation must also give attention to the leadership problem.

So we return to the leadership factor and the question of whether rural leadership development is amenable to public policy efforts. From a research perspective, it would be useful to know whether local leadership in rural communities is a function of the personalities in those communities (in which case, programs aimed at training leaders would be appropriate), or whether it is a function of the objective socio-economic situation of the various communities (in which case, policy must address the situation).

REFERENCES

Akin, John S., and Irwin Garfinkel. "School Expenditures and the Economic Returns to Schooling." J. Human Resources. 12-4, pp. 460-481.

Cibulka, James G. "An Examination of Alternative Poverty Measures for the Wisconsin Equalization Aid Formula." J. Educ. Fin. (Winter 1986), pp. 331-346.

Fuller, Bruce, Kathleen Gorman, and John Edwards. "The Influence of School Quality on Economic Growth: An Historical Look at Mexico, 1880-1945." Paper presented at Annual Meeting of the American Education Research Assoc., New Orleans, April 23-27, 1984.

Guthrie, J. W., W. I. Garms and L. C. Pierce. School Finance and Education Policy: Enhancing Educational Efficiency, Equality, and Choice. 2nd ed. Englewood Cliffs, N.J., Prentice Hall, 1988.

Hanushek, Eric A. "Conceptual and Empirical Issues in the Estimation of Educational Production Functions." J. Human Resources. 14-3, pp. 351-388.

National Center for Educational Statistics. Digest of Education Statistics, 1989. Washington.

McNamara, Kevin, and Brady Deaton. "Paper presented at the Annual Meeting of the Southern Association of Agricultural Scientists (85th, New Orleans, LA, January 31-February 3, 1988).

McNeill, William H. The Great Frontier, Freedom and Hierarchy in Modern Times. Princeton, NJ, Princeton Univ. Press, 1983.

Smith, Eldon D. "Reflections on Human Resources in the Strategy of Rural Economic Development," Rev. Reg. Studies. 19-1 (Winter 1989), pp. 13-22.

South Carolina Budget and Control Board. South Carolina Statistical Abstract, 1989. Columbia, Div. of Research and Statistical Services. 1989.

South Carolina Code. 1988 Cumulative Supplement. Vol. 20. Rochester, New York, The Lawyers Co-operative Publishing Co., 1988.

South Carolina Department of Education. Rankings of the Counties and School Districts of South Carolina, 1987-88. Columbia, 1989.

South Carolina Department of Education. Annual Report, 1988. Columbia, 1989.

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